

NASA TECH BRIEF



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Shaker Slip-Plate Adapter

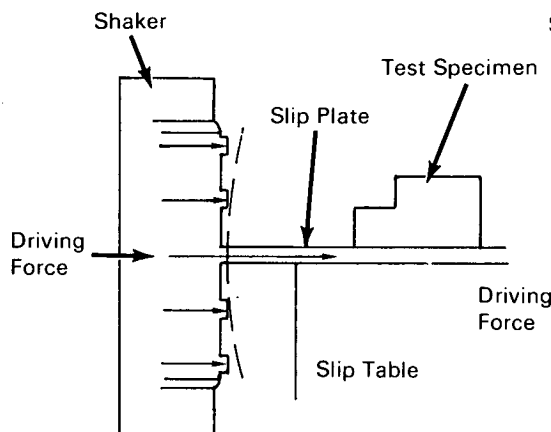


Figure 1. Shaker Head Coupled Directly To Slip Plate

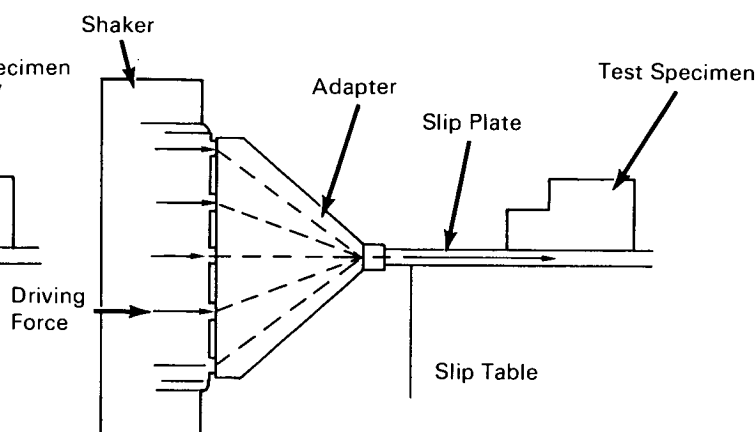


Figure 2. Improved Technique Using Horizontal Adapter

The problem:

Specimens subjected to vibration tests are mounted to a horizontal slip table which is driven by an electrodynamic shaker. To attach the edge of a horizontal plate directly to the shaker head would result in the ineffective dissipation of the driving force which is usually stronger around the outer bolt circle (Figure 1).

The solution:

A horizontal adapter, shown in Figure 2, ties in all of the attachment bosses and makes a rigid coupling which terminates in a single row of attachment bosses at the edge of the horizontal plate.

How it's done:

The adapter is made of a lightweight magnesium alloy and weighs approximately 50 lbs. A sand casting method was selected as the means of fabrication in order to provide a structure with greater rigidity and superior damping characteristics. This adapter allows

the entire driving force of the electrodynamic shaker to be transmitted with minimum loss at all frequencies up to 3000 Hz.

Note:

No additional documentation is available. Specific questions, however, may be directed to:

Technology Utilization Officer
Marshall Space Flight Center
Huntsville, Alabama 35812
Reference: B69-10785

Patent status:

No patent action is contemplated by NASA.

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